

Course Syllabus

1	Course title	Biosecurity and animal health management	
2	Course number	0602931	
3	Credit hours	3	
	Contact hours (theory, practical)		
4	Prerequisites/corequisites		
5	Program title	PHD Animal health	
6	Program code		
7	Awarding institution		
8	School	Agriculture	
9	Department	Animal production	
10	Course level	PhD	
11	Year of study and semester (s)		
12	Other department (s) involved in teaching the course		
13	Main teaching language		
14	Delivery method	<input type="checkbox"/> Blended	
15	Online platforms(s)	Microsoft teams	
16	Issuing/Revision Date		

17 Course Coordinator:

Name: Firas hayajneh	Contact hours: Tuesday-Thursday (8-12 AM)
Office number:	Phone number:0792799430
Email: firashope@gmail.com	



18 Other instructors:

Name:

Office number:

Phone number:

Email:

Contact hours:

Name:

Office number:

Phone number:

Email:

Contact hours:

19 Course Description:

This course emphasis on study of the effective strategies for health management of livestock animals, disease prevention and control through application of biosecurity programs that based on knowing the nature of threat (causes of diseases), risk assessment of importing animals from different resources, application of epidemiological principles that support disease monitoring with the using of isolation, quarantine and eradication principles, designing of an effective biosecurity programs for all sectors of animal production, evaluation of the biological, economical and social impact for the success or failure of biosecurity programs, and the using of modern biotechnologies in animal health management.



20 Course aims and outcomes:

A- Aims:

Designed to provide students with broad coverage of key areas of scientific, legal, social, ethical, and political aspects of biosecurity, emphasizing current problems and research in the areas of biodefense, emerging infectious diseases, synthetic biology, and other topics. In combination with related reading assignments, the weekly special topics-based seminar will integrate knowledge of modern biomedical research, advances in biotechnology, and natural and manmade biological threats with the skills to analyze and develop public policies and strategies for enhancing global biosecurity.

B- Students Learning Outcomes (SLOs):

Upon successful completion of this course, students will be able to:

Program SLOs / SLOs of the course	SLO (1)	SLO (2)	SLO (3)
A. Knowledge and Understanding: Student is expected to	1. Understand the basic concepts of biosecurity in animal agriculture from small- to largescale operations	2. Communicate biosecurity-related topics in both the written and oral format	3. Understand how paradigms of biosecurity relate to society and policy and their own lives
B. Intellectual Analytical and Cognitive Skills: Student is expected to	1. Understand the basic concepts of biosecurity at the national and international level	2. Understand the components of scientific literacy and the process of scientific inquiry.	3. Critically evaluate science-related news and information for their credibility and validity.
C. Subject-Specific Skills: Students is expected to	1. Develop an understanding of the national and international organizations involved in local and global animal health	2. Communicate complex scientific information.	3. Apply critical thinking and reasoning skills to solve problems related to biosecurity.

D. Transferable Key Skills: Students is expected to	Demonstrate the ability to implement a biosecurity plan in a small- or large-scale animal production operation	Apply simple predictive models to biology-related phenomena in the context of biosecurity.	Recognize that biosecurity is a dynamic, collaborative, and inter-disciplinary field.
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21. Topic Outline and Schedule:

Week	Lecture	Topic	Intended Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	1.1	Course Introduction (expectations, due dates of major assignments, instructor introduction) ; What is Biosecurity	A1. B2. C3	Blended			Presentations, examinations	Reference journals

Week	Lecture	Topic	Intended Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
		and Why is it Important?						
2	2.1	Biosecurity Case Studies – Poultry Operations (Hobby to Production Chain)	D3, C1.2.3	Blended			Presentations, examinations	Reference journals
3	3.1	Biosecurity Basics: Disease transmission, routes of infection, disinfection protocols, points of entry, etc	A1.2.3, B1,2	Blended			Presentations, examinations	Reference journals
4	4.1	Biosecurity in Cattle Operations : From the Hobby Farm to Production Chains	B1,2,3	Blended			Presentations, examinations	Reference journals
5	5.1	Biosecurity Case Studies - Cattle Operations (Hobby to	C1,2,B1,3,D 231	Blended				journals

		Production Chains)						
	5.2	Biosecurity Case Studies	D1.2.3	Blended			Presentations, examinations	Reference
6	6.1	Intersection of Wildlife and Agricultural Animals – Discussion of reservoir species, predation, disease vectors, etc.	C1,2,B1,3,D231	Blended			Presentations, examinations	journals
7	7.1	Biosecurity of Milk and Eggs – Discussion of processing of milk/eggs, diseases of concern in unpasteurized or undercooked products, discussion of management of neonatal and	D1.2.3	Blended			Presentations, examinations	Reference

		suckling animals to reduce disease spread, etc.						
8	8.1	Biosecurity of Milk and Eggs – Discussion of processing of milk/eggs, diseases of concern in unpasteurized or undercooked products, discussion of management of neonatal and suckling animals to reduce disease spread, etc.	A1. B2. C3 D3, C1.2.3	Blended			Presentations, examinations	journals
9	9.1	Biosecurity Case Studies – Milk and Eggs (Cases will include zoonotic	A1.2.3, B1,2 B1,2,3	Blended			Presentations, examinations	Reference

		diseases along with maternal-offspring disease spread)						
10	10.1	Biosecurity in Slaughter Houses – Discussion of disease surveillance in slaughter houses, slaughter process and procedures , sanitation, etc.	A1. B2. C3 D1.2.3				Presentations, examinations	journals
11	11.1	Biosecurity Case Studies – Slaughter Houses ; discussion of trace back mechanisms, agencies involved in disease surveillance, etc.	D3, C1.2.3 D1.2.3				Presentations, examinations	Reference
12	12.1	Global Biosecurity Day 2 ; Pick	C1,2,B1,3,D 231				Presentations,	journals

		up where last lecture ended, discussion of the global agencies (OIE, WHO) involved in global health, safeguards to prevent disease spread, country specific laws to prevent disease spread, etc.	B1,2,3				examinations	
13	13.1	Global Biosecurity Case Studies Day 2 – Discussion of the major foreign animal diseases of current concern ; will end lecture discussing Rinderpest and the internation	A1. B2. C3				Presentations, examinations	Reference
				Blended				

		al efforts that eradicated this disease from Earth						
14	14.1	Intersection of Human and Animal Health ; Define and discuss zoonotic diseases (what they are, why they are important, etc.). Will focus on the extremely important role of Animal Scientists, Production Animal Experts, and Veterinarians in both animal and human health	A1. B2. C3 A1.2.3, B1,2	Blended			Presentations, examinations	journals
15	15.1	Public Health at the National and	A1.2.3, B1,2 B1,2,3 D3, C1.2.3	Blended				Reference

		<p>International Level – Discussion of the importance of understanding how to apply herd health concepts to the population as a whole (locally, regionally, nationally, and internationally). Discussion with students of different stakeholders in Public Health and the role of animal experts in Public Health roles</p>						
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22 Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:



Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform

23 Course Requirements

(e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

24 Course Policies:

- A- Attendance policies:
- B- Absences from exams and submitting assignments on time:
- C- Health and safety procedures:
- D- Honesty policy regarding cheating, plagiarism, misbehavior:
- E- Grading policy:
- F- Available university services that support achievement in the course:

25 References:

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26 Additional information:

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Name of Course Coordinator: Firas Hayajneh	Signature: -----	Date: 2/12/2021
Head of Curriculum Committee/Department:	-----	Signature: -----

Head of Department:	-----	Signature: -----
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Head of Curriculum Committee/Faculty:	-----	Signature: -----
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Dean:	-----	Signature: -----